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<p>(21) International Application Number: PCT/EP99/08900 (22) International Filing Date: 4 November 1999 (04.11.99) (30) Priority Data: 98203745.9 6 November 1998 (06.11.98) EP (71) Applicant (for all designated States except US): SHELL INTERNATIONALE RESEARCH MAATSCHAPPIJ B.V. [NL/NL]; Carel van Bylandtlaan 30, NL-2596 HR The Hague (NL). (72) Inventors; and (75) Inventors/Applicants (for US only): BOUMA, Jacob, Hendrik [NL/NL]; Jekerstraat 164, NL-7523 VT Enschede (NL). DRIES, Hubertus, Wilhelmus, Albertus [NL/NL]; Badhuisweg 3, NL-1031 CM Amsterdam (NL).</p>		<p>(81) Designated States: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).</p> <p>Published <i>With international search report.</i></p>
<p>(54) Title: SEPARATOR APPARATUS</p>		
<p>(57) Abstract</p> <p>A cyclone separator apparatus for separating solids from a gas-solid containing feed resulting in a gas-rich stream, the cyclone separator comprising an upright hollow circular housing (1) fluidly connected to a dipleg (8) having at its lower end a flapper valve (14), wherein the dipleg (8) has a lower part (11), which lower part has a diameter which continuously increases from the top (12) of the lower part (11) to the lower end (13) of the dipleg.</p>		